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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BRANDT, CHRISTOPHER M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/511,641	Applicant(s) VERMA ET AL.	
	Examiner CHRISTOPHER M. BRANDT	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This Action is in response to applicant's arguments filed on December 31, 2007. **Claims 1-15** are still pending in the present application. **This Action is made FINAL.**

Response to Arguments

Applicant's arguments filed December 31, 2007 have been fully considered but they are not persuasive.

With regard to applicant's argument that nowhere does Kallio teach or suggest that; "the WLAN appears as another PLMN to the selected PLMN", the examiner respectfully disagrees. Kallio specifically states in paragraph 24 that figure 1 shows a seamless network for providing seamless mobility between a GSM network and a local area network such as a wireless LAN. It is noted that seamless means that this mobility is transparent to the user and therefore the WLAN would appear as another GSM or PLMN (which is disclosed by Ludwig (column 5 lines 57-60, column 6 lines 23-29)).

With regard to applicant's argument that nowhere does Kallio show or suggest an interworking function, the examiner respectfully disagrees. Kallio specifically teaches in paragraph 30 that the WMC contains software and protocol stacks needed for providing the handover request and other handover messages. Therefore, Kallio is discussing an interworking function to make the switch so that the mobility is seamless / transparent to the user (i.e. the WLAN appears as another PLMN to the selected PLMN).

With regard to applicant's argument that even if the structure of Ludwig were to be included in the structure of Kallio, the instant invention would not be obtained, the examiner

respectfully disagrees. The examiner relied upon Ludwig to simply show applicants that regardless of the network, i.e., GSM, PLMN, etc., one of ordinary skill in the art would have been motivated to create a network with seamless mobility between two networks such as GSM or PLMN with a WLAN. Simply, implementing this feature within another network such as PLMN, does not make the network novel.

With regard to applicant's argument that Kallio does not disclose the claimed invention because Kallio uses an A interface, not a Gp interface, the examiner disagrees. First, as previously discussed, simply implementing an already used feature into another system does not warrant an application patentable. Second, since Kallio is discussing a GSM network, one of ordinary skill in the art is aware that terminology of GSM is different from terminology of PLMN. However, this does not mean that Kallio is not teaching the same interface for the same purpose. In addition, Ludwig teaches the PLMN network and the use of the Gp interface (column 5 line 66 - column 6 line 6, 23-39).

As a result, the argued features are written such that they read upon the cited references.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6, 8-13, and 15 are rejected under 35 USC 103(a) as being unpatentable over **Kallio (US PG PUB 2002/0147008 A1)** in view of **Ludwig (US Patent 6,256,498 B1)**.

Consider **claim 1**. Kallio discloses a wireless Local Area Network (WLAN) (paragraph 28), comprising:

an access point for communicating with a plurality of mobile stations (figure 1, paragraphs 10, 29, read as the WMC is arranged to serve as a WLAN access point); and

an interworking function, coupled between the access point and a selected GSM network, via an interface gate, the interworking function enabling communications between the selected GSM and the WLAN wherein the WLAN appears as another GSM to the selected GSM (paragraph 28, read as a Mobile Transaction Server (MTS) 220 and a hotspot LAN 230 that are connected to the GSM network 100, via a A-interface gate (AGW) 310).

Kallio substantially discloses the claimed invention except he fails to teach Public Land Mobile Network (PLMN) and an inter-PLMN backbone.

However, Ludwig discloses a Public Land Mobile Network (PLMN) and an inter-PLMN backbone (column 5 lines 57-60, column 6 lines 23-29, read as the inter-PLMN backbone network is the IP network interconnecting GSN support nodes and intra-PLMN backbone networks in different public land mobile networks).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Ludwig into the invention of Kallio in order to integrate WWW services into a digital cellular communication network and also to provide the functionality of the Gn interface plus security functionality required for inter-PLMN communication (column 10 lines 27-37).

Consider **claim 8**. Kallio discloses a method for communicating with a selected GSM network via a wireless Local Area Network (WLAN) (paragraph 28), comprising the steps of:

connecting the WLAN to the selected GSM network through an interface gate (paragraph 28, read as a Mobile Transaction Server (MTS) 220 and a hotspot LAN 230 that are connected to the GSM network 100, via a A-interface gate (AGW) 310); and

providing an interworking function, which communicates with the interface to convert protocols between the WLAN and the selected GSM network wherein communications from the WLAN to the selected GSM network appear to be from another GSM network, and communications from the selected GSM network to the WLAN appear to be from within the WLAN (paragraphs 30, 35, read as the WMC may contain software and protocol stacks needed

for providing the handover request and other handover messages. Base station identification information regarding to a WLAN cell like an ordinary GSM cell).

Kallio discloses the claimed invention except a Public Land Mobile Network (PLMN) and inter-PLMN interface.

However, Ludwig discloses a Public Land Mobile Network (PLMN) and inter-PLMN interface (column 5 lines 57-60, column 6 lines 23-29, read as the inter-PLMN backbone network is the IP network interconnecting GSN support nodes and intra-PLMN backbone networks in different public land mobile networks. In addition, in case serving SGSN and gateway GGSN support nodes in different public land mobile networks PLMN they are interconnected via the Gp interface).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Ludwig into the invention of Kallio in order to integrate WWW services into a digital cellular communication network and also to provide the functionality of the Gn interface plus security functionality required for inter-PLMN communication (column 10 lines 27-37).

Consider **claim 13**. Kallio discloses a method for communicating with a mobile station and a selected GSM network in a wireless Local Area Network (WLAN) (paragraph 28), comprising the steps of:

broadcasting a routing area identifier (paragraph 43, read as the WLAN cell broadcasts GSM cell information messages to Mobile Station);

receiving a routing area update request from the mobile station that enters into a coverage area of the WLAN in response to the broadcast (paragraph 44, read as the Mobile Station will start to report GSM frequency in the measurement reports to the WLAN);

transmitting the routing area update request to a GSM cell / neighbors of a selected GSM network, via an interface gate, wherein the WLAN appears as a logical GSM network to the selected GSM network (see table on page 5, paragraph 44, read as the wireless LAN can send these additional parameters in the same messages where the played GSM cell information is indicated, Wireless LAN informs GSM neighbors); and

receiving a context response from the GSM cell / neighbors via the interface gate (paragraph 49, read as a handover request is sent towards the MSC and then delivered to the WMC, via AGW).

Kallio discloses the claimed invention except he fails to explicitly teach a Public Land Mobile Network (PLMN), inter-PLMN backbone, a Gp interface, and the SGSN.

However, Ludwig discloses a Public Land Mobile Network (PLMN), inter-PLMN backbone and a Gp interface (column 5 lines 57-60, column 6 lines 23-29, read as the inter-PLMN backbone network is the IP network interconnecting GSN support nodes and intra-PLMN backbone networks in different public land mobile networks. In addition, in case serving SGSN and gateway GGSN support nodes in different public land mobile networks PLMN they are interconnected via the Gp interface).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Ludwig into the invention of Kallio in

order to integrate WWW services into a digital cellular communication network and also to provide the functionality of the Gn interface plus security functionality required for inter-PLMN communication (column 10 lines 27-37).

Consider **claim 2 and as applied to claim 1**. Kallio and Ludwig disclose wherein the interworking function enables communications with the selected PLMN using the Gp interface (Ludwig; column 6 lines 17-29).

Consider **claim 3 and as applied to claim 2**. Kallio and Ludwig disclose wherein the interworking function performs the functions of a logical Serving General Packet Radio Service (GPRS) Support Node (SGSN) (Ludwig; column 6 lines 7-29).

Consider **claim 4 and as applied to claim 3**. Kallio and Ludwig disclose wherein the interworking function is viewed by the selected PLMN as an SGSN in another UMTS/GPRS PLMN (Ludwig; column 6 lines 7-29).

Consider **claim 5 and as applied to claim 1**. Kallio and Ludwig disclose wherein the selected PLMN includes Session Management/GPRS mobility management (SM/GMM) procedures, which are reused in the WLAN by the use of an adaptation layer in a mobile dual-protocol stack and in the IWF to WLAN interface to mimic the functionality of a Radio Resource Control (RRC) protocol sub-layer (Kallio; paragraph 30, Ludwig; column 6 lines 6-16).

Consider **claim 6 and as applied to claim 1**. Kallio and Ludwig disclose wherein the interworking function utilizes a GPRS tunneling protocol between a GGSN and the interworking function for downlink traffic coming from the GGSN to reduce UMTS traffic, and provides a

common Internet access to all users for all other traffic to reduce the traffic between the interworking function and the GGSN (Kallio; paragraph 23, Ludwig; column 5 lines 40-47).

Consider **claim 9 and as applied to claim 8**. Kallio and Ludwig disclose wherein the providing step comprises providing an interworking function that communicates between the selected PLMN and the WLAN using the Gp interface (Kallio; paragraph 28, Ludwig; column 6 lines 17-29).

Consider **claim 10 and as applied to claim 8**. Kallio and Ludwig disclose wherein the providing step comprises providing an interworking function that mimics the functions of a Serving General Packet Radio Service (GPRS) Support Node (SGSN) (Ludwig; column 6 lines 7-29).

Consider **claim 11 and as applied to claim 8**. Kallio and Ludwig disclose further comprising utilizing a GPRS tunneling protocol between a GGSN and the interworking function for downlink traffic coming from the GGSN to reduce traffic on the selected PLMN (Kallio; paragraph 23, Ludwig; column 5 lines 40-47).

Consider **claim 12 and as applied to claim 8**. Kallio and Ludwig disclose further comprising an adaptation layer in a mobile dual-protocol stack in the interworking to WLAN interface to mimic the functionality of a Radio Resource Control (RRC) protocol sub-layer, whereby the session management/GPRS mobility management (SM/GMM) procedures are reused in the WLAN (Kallio; paragraph 30, Ludwig; column 6 lines 6-16).

Consider **claim 15 and as applied to claim 13**. Kallio and Ludwig disclose further comprising the step of providing an interworking function that mimics the functions of a Serving

GPRS Support Node (SGSN) such that the WLAN appears as another PLMN to the selected PLMN (Kallio; paragraph 35, Ludwig; column 6 lines 7-29).

Claims 7, 14 are rejected under 35 USC 103(a) as being unpatentable over **Kallio (US PG PUB 2002/0147008 A1)** in view of **Ludwig (US Patent 6,256,498 B1)** and further in view of **Rune (US Patent 6,212,390 B1)**.

Consider **claims 7 and 14 and as applied to claim 1 and 13, respectively**. Kallio and Ludwig disclose the claimed invention except they fail to explicitly disclose wherein the selected PLMN comprises a Universal Mobile Telecommunications System (UMTS) network.

However, Rune discloses wherein the selected PLMN comprises a Universal Mobile Telecommunications System (UMTS) network (column 1 lines 55-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Rune into the invention of Kallio and Ludwig in order to support all the current wired and wireless technology offer and have the ability to support new applications that are common to both, or unique to UMTS (column 1 lines 46-54).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street

Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Brandt whose telephone number is (571) 270-1098.

The examiner can normally be reached on 7:30a.m. to 5p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Christopher M. Brandt

C.M.B./cmb

April 4, 2008

/George Eng/

Supervisory Patent Examiner, Art Unit 2617